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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,271

04/17/2006

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17233.013

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03/08/2010

EXAMINER

WILKINS III, HARRY D

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

03/08/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,271	Applicant(s) FLETTNER, MARC	
	Examiner Harry D. Wilkins, III	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/10/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status

1. Applicant's amendment has overcome the prior grounds of rejection. However, a further search was conducted and new rejection grounds are presented below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13, 14, 17-21 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver et al (US 6,267,883) in view of Conkling (US 4,248,690) and Ditzler et al (US 5,215,375).

Weaver et al teach (see abstract, figures and col. 2) a water treatment unit comprising a casing (18) having proximal and distal ends and a metallic reacting anode (20) arranged in the casing and "electrically conductively connected" to the casing via the water. Weaver et al teach that the metallic reacting anode "promotes turbulent flow in the chamber 18 in any suitable manner.

Weaver et al is silent on the composition of the casing, but one of ordinary skill in the art would have found it obvious to have made it from a metallic material resistant to corrosion from the water flowing within the casing.

Weaver et al fail to teach a turbulence body as claimed.

Art Unit: 1795

Conkling teaches (see abstract) that it was known that electrodes could become covered with precipitates and scale, and that it was desired to cause a vigorous and turbulent flow to pass over the electrodes to prevent fouling of the electrodes by the precipitates and scale.

Ditzler et al teach (see figures and col. 1, line 34 to col. 2, line 17) a device for inducing turbulent flow in a conduit, comprising placing a turbulence body within a conduit and composed of a variety of perforated plates varyingly oriented in relation to each other.

Therefore, it would have been obvious to one of ordinary skill in the art to have added the turbulence body of Ditzler et al into the casing of Weaver et al between the proximal end of the casing and the anode for the purpose of creating a turbulent flow within the casing at the anode to prevent precipitate and scale adhesion to the anode as suggested by Conkling.

Regarding claims 14 and 17, it would have been obvious to one of ordinary skill in the art to have provided an insulating spacer for electrically isolating the anode from the turbulence body to prevent the turbulence body from being at the same electrode potential as the anode.

Regarding claim 18, it would have been obvious to one of ordinary skill in the art to have fixed the anode (20) in place to prevent it from moving around in the turbulent flow and damaging other portions of the unit.

Regarding claim 19, the turbulence body if Ditzler et al included holes.

Regarding claim 20, the turbulence body if Ditzler et al included more than one perforated plate oriented differently to each other.

Regarding claim 21, the additional plates of Ditzler et al are “bonded” to each other, the bond constituting a “connector”.

Regarding claims 24-26, the turbulence body if Ditzler et al included holes, and Ditzler et al recognized that the size and shape of the holes were result affective variables affecting the flow rate and turbulence produced.

4. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver et al (US 6,267,883) in view of Conkling (US 4,248,690) and Ditzler et al (US 5,215,375) as applied above to claims 13, 14, 17-21 and 24-26, and further in view of Long, Jr et al (US 7,135,155).

Weaver et al, Conkling and Ditzler et al fail to disclose using a second turbulence body between the anode and the distal end of the metallic casing.

Long, Jr. et al teach (see figure 1 and col. 12, lines 4-27) the use of static mixers in similar electrode water treatment units, where the static mixers were located downstream from the first electrode (anode).

Therefore, it would have been obvious to one of ordinary skill in the art to have added a second turbulence body between the anode and the distal end of the metallic casing as suggested by Long, Jr et al for the purpose of ensuring adequate mixing of the water passing through the unit to properly cleanse the water.

Art Unit: 1795

Regarding claim 16, at least one portion of the second turbulence body would have been oriented to have a 90 degree axial offset compared to at least one portion of the first turbulence body.

5. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver et al (US 6,267,883) in view of Conkling (US 4,248,690) and Ditzler et al (US 5,215,375) as applied above to claims 13, 14, 17-21 and 24-26, and further in view of Hargash (US 3,677,522).

Weaver et al in view of Conkling and Ditzler et al do not teach the features of claims 22 and 23.

Hargash teaches (see figure 1, abstract and col. 1, lines 68-75) alternative means for generating turbulence through a flowing circular cross section of pipe. These means included plural perforated plates arranged perpendicular to the direction of flow of the fluid.

Therefore, it would have been obvious to one of ordinary skill in the art to have either added the perpendicular perforated plates of Hargash to the unit for the purpose of further increasing generation of turbulence.

Regarding claim 22, it would have been obvious to one of ordinary skill in the art to have adjusted the size and shape of the perforations on the plates in order to achieve the desired pattern and magnitude of turbulence in the fluid flow.

Regarding claim 23, Hargash teach three perforated plates, 61, 66 and 68.

Response to Arguments

6. Applicant's arguments with respect to claims 13-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D. Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-F 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1795

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harry D Wilkins, III/
Primary Examiner, Art Unit 1795

hdw